The DWR and USBR Environmental Monitoring Program: A Thirty Year History of Water Quality and Biota in the Bay-Delta System

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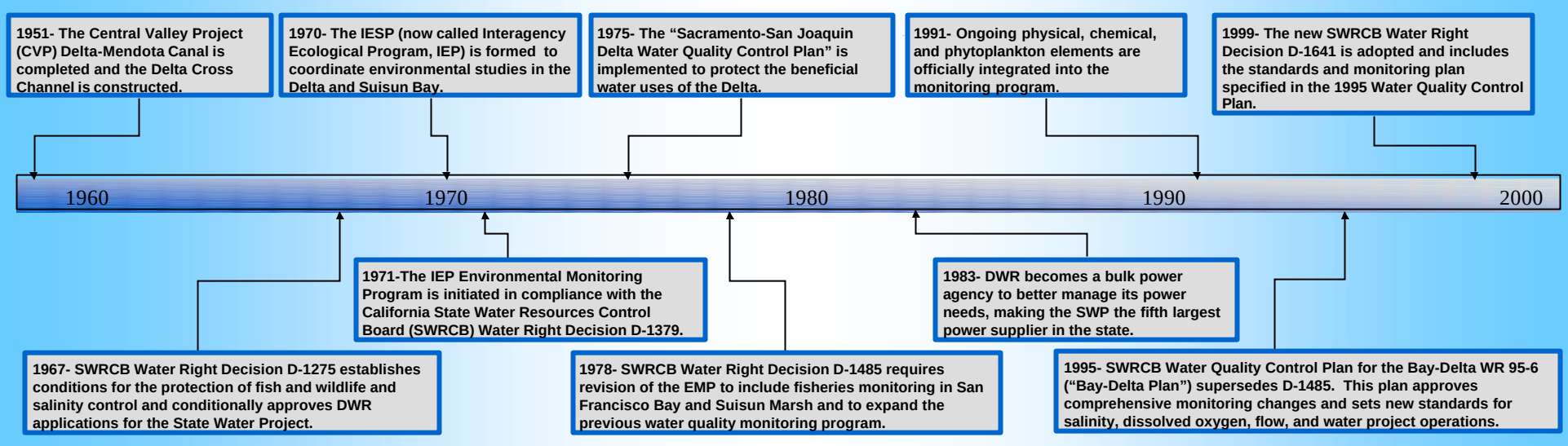
Introduction

Over the past thirty years, the IEP Environmental Monitoring Program has provided data to assess the status and trends in basic water quality, phytoplankton, zooplankton, and benthos in the upper San Francisco Estuary. This program is mandated by State Water Resources Control Board Water Right Decision 1641 as well as previous decisions. These water right decisions regulate exports and operations of the State Water Project and Central Valley Project. The mission of the Environmental Monitoring Program is to monitor water quality and lower trophic levels to assess the affects of water project operations on the beneficial uses of the upper San Francisco Estuary.

This poster and others provide a brief history of the program, a summary of program origins and objectives, and the evolution of sampling stations and measured constituents.

Significant Events Affecting Environmental Monitoring in the Bay-Delta System



With the authorization to build and operate the CVP, the USBR also accepted the responsibility for maintaining water quantity and quality and environmental aspects related to water supplies in the Delta. Thus, most early environmental monitoring programs (1950s through 70s) associated with project operations were carried out under the auspices of the USBR. Four of these studies were combined into the "Delta-Suisun Bay Surveillance Program." The two studies that eventually became incorporated into the IEP Environmental Monitoring Program were the "Central Valley Operations Program" (present-day sites include a "C" in the station names) and the "Suisun Marsh Research and Testing Program" (present-day "S" sites). The two remaining studies focused on the effects of the planned San Luis Master Drain ("Delta-San Luis Drain Surveillance Program," today's "D" sites) and the Peripheral Canal ("Peripheral Canal Study Program," today's "P" site). The San Luis Master Drain was meant to solve agricultural drainage problems in the San Joaquin Valley, while the Peripheral Canal would have routed North and East Delta water supplies intended for Southern California around rather than through the Delta. These two projects were never realized due to environmental concerns and lack of voter approval. However, the studies associated with these projects together with the other two studies have become the basis for today's water quality monitoring efforts.

The primary objectives of the EMP are to:

- Document compliance with water quality standards
- Detect and document trends in environmental conditions
- Collect data and provide information on specific issues involving special studies
- Provide accurate data on a timely basis
- Increase current understanding of the large-scale characteristics and functions of the Delta ecosystem to better predict system-wide responses to management options